

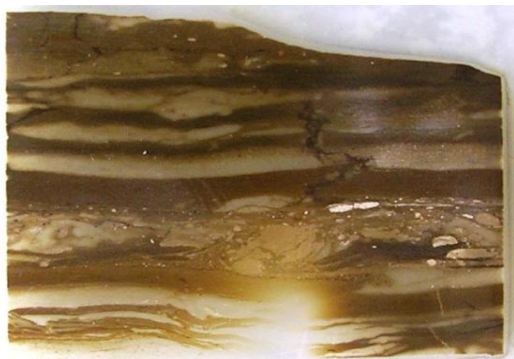


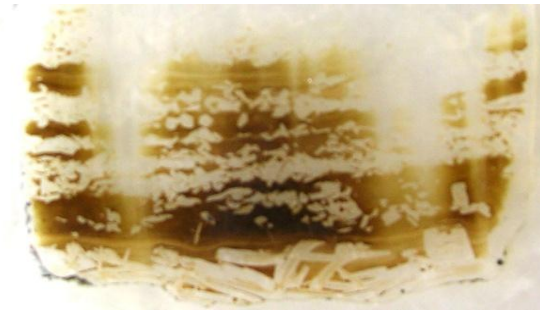
ERDA 1 Black Forks Core: E216 T 16N; R 108W; Sec 24

Sample ID:	Depth (ft):	Major:	Minor:	Trace:	Description/Environment:
<i>BF-102A-1</i>	1501.5'	nahcolite		searlesite	Fibrous white crystalline hydrofracture within a laminated oil shale from a perennial lake located beneath Trona Bed 2.
<i>BF-95A-1</i>	1408.1'	searlesite		northupite?	Mica-like diagenetic growth within massive green mud layers from saline lake. Very difficult to powder. Sampled between Oil Shale Beds 6 and 7.
<i>BF-61B-1</i>	971.5'	shortite	quartz, calcite	analclime	Displacive growth crystals from an perennial lake's oil shale lamina. Some mud was sampled with displacive growth crystals. As sample was being powdered it began to congeal as though it was a hydrated mineral, very strange behavior. Located within region containing Trona Bed 19.
<i>BF-86B-1A</i>	1291.5'	shortite			Displacive hexagonal growth crystals from a thin laminated dark-toned mudstone; some mud may have been sampled with the displacive growth crystals. Crystals are cross-cut by a secondary fracture fill. Possible replacement of another precursor mineral, pseudomorphs after gaylussite. Located between Trona Beds 14 and 15.
<i>BF-54A-1Algm</i>	883'	calcite, dolomite		k-spar	Light green-toned muds deposited in a perennial lake, though exposure has occurred. Located between Trona Beds 20 and 21.
<i>BF-60D-2t</i>	950.1'	ankerite (fe-dolomite)	quartz, calcite	nahcolite	Mud lamina from a fluctuating shoreline located near Trona Bed 19.

<i>BF-57A-1A-BM1</i>	922'	calcite, dolomite		quartz	Laminated lake deposit with green, brown, and organic-rich (?) mud lamina. Displacive growth hexagonal crystals and smaller dark sulfide growths present. Brown mud lamina sampled. Located within Trona Bed 20.
<i>BF-57A-1A-MD2</i>	922'	shortite	k-spar, quartz, dolomite		Mud with displacive growth crystals. Located within Trona Bed 20.
<i>BF24B-1A-BL1</i>	491'	dolomite	quartz	albite, illite?	Laminated mud (lean oil shale) with green/grey fractures throughout. Few disseminated sulfide cubes in sample. Black lamina. Located above all saline beds.
<i>BF24B-1A-BC2</i>	491'	shortite		marcasite, quartz	Black crystal.
<i>BF24B-1A-GM3</i>	491'	dolomite	quartz	nahcolite? aragonite?	Green mud.
<i>BF24B-1A-BC2a1</i>	491'	shortite		opal, marcasite	Black fracture material.
<i>BF-52D-2B-MM3</i>	847'	dolomite		quartz, zeolite	Lean laminated oil shale with few crystalline layers. Crystalline layers are clearly displacive as they move and disrupt surrounding mud lamina and also incorporate mud. Mud crack present near top of sample. Crystals appear tabular to rectangular. Not similar to shortite or trona. Appear more similar to pirssonite seen in the KM-3 Searles Lake core. Similar deposit seen in outcrop in Firehole Canyon. Medium tone mud lamina sampled.






BF-52D-2B-X4	847'	shortite		dolomite, quartz	Displacive crystal growth possibly some incorporated mud also sampled.
BF-52D-2B- LM1	847'	shortite		Dolomite	Light toned mud (contains some of the displacive crystal growths nearby).
BF-52D-2B-	847'	dolomite	K-spar	zeolite?	Tan mud lamina.
BF-52D- 2BLM1	847'	shortite		bassanite?	Starved ripple form.
BF-57B-3C- DM1	919'	quartz (opal?)	dolomite, K- clay spar (montmorillon ite?)		Finely laminated lean oil shale with tan and tan grey muds that contain displacive growth hexagonal crystals. Possible flame structures with no evidence for desiccation. Dark mud layer
BF-57B-3C- DM2	919'	shortite	quartz, dolomite		Displacive growth with some surrounding mud.
BF-57A-2Bv- VGX	920'	shortite		quartz	Laminated lean oil shale with tan and tan grey lamina with crystalline layers of displacive growths that trap surrounding lean mud. Tabular/rectangular displacive growths likely originated as pirssonite. Displacive growth crystal from crystalline lamina.
BF-24C-2B-- M1	488'	quartz, dolomite, albite			Laminated oil shale with dark green and tan lamina. Large displacive growths (1/2 to 2 cm) Hackly texture, very friable. Late- stage diagenetic growths.
BF-24C-2B-- X2	488'	shortite		dolomite, calcite	



<i>BF-25D-1A-HX1</i>	497'	shortite		dolomite, quartz	Laminated oil shale with root beer colored fractures and hexagonal displacive growths filled with root beer colored crystals. Disseminated sulfite (pyrite cubes) are common. Hexagonal crystal and some surrounding mud or entrapped mud may have been sampled.
<i>BF-61B-OB1-BRM1</i>	970'	quartz, dolomite	calcite	albite	Orpema-conglomerate with brown and black lamina and white/tan intraclasts with discontinuous lenses with unidirectional tails. Brown mud.
<i>BF-61B-OB1-BF-61B1</i>	970' 970'	dolomite calcite	quartz analclime, clay	nahcolite	Black mud. White intraclast.
<i>BF-53B-1AOL-BM1</i>	867'	dolomite	quartz, clay (montmorillonite?)	Albite	Recrystallized evaporite unit with mud partings. Mud is discontinuous and contains disseminated sulfides. Recrystallized evaporites are clusters of fibrous radial needles (mm-sized). Brown mud parting.
<i>BF-53B-1AOL-WX2</i>	867'	shortite		Quartz	White displacive needles in mud partings.
<i>BF-53C-2Bx</i>	862'	dolomite		Quartz	Orpema-conglomerate with black and brown lamina and light toned intraclasts. Few (1/2 cm scale) displacive hexagonal crystals with sulfide centers. Disseminated pyrite cubes near displacive hexagonal crystals and in mud (<1/2mm) and displacive needle growths (2-3 cm long). Displacive hexagonal growth.

<i>BF-53C-2B-DM1</i>	862'	shortite		quartz	Dark discontinuous laminated mud in orpema-conglomerate.
<i>BF-59D-1A-DGM</i>	937'	dolomite	quartz		Mud cracks in laminated tan and grey muds which are discontinuous and contain few mud lenses. Tan irregular nodules from possible intraclasts.
<i>BF-59D-1A-WIN</i>	937'	calcite	quartz, k-spar	zeolite? waikarlite	White intraclasts?
<i>BF-54C-2Bx</i>	875'	shortite		dolomite, quartz	Bottom of sample is orpema-conglomerate with light tan/grey intra clasts. Top of sample composed of recrystallized needles and lenses of light tan and grey mud with thin mud partings of black mud. Crystals are displacive and muds are distorted by crystal growth. Crystalline material.
<i>BF-54C-2B-TN</i>	875'	dolomite	quartz	clay (saponite?)	Tan intraclasts
<i>BF-54C-2B-DM</i>	875'	quartz	k-spar	clay (illite?)	Dark mud
<i>BF-52A-1As-FWN1</i>	856'	dolomite	quartz		Laminated mudstone (lean oil shale/calc/dolomite). Possible starved ripples with displacive growth tabular crystals (<5 mm long). Lamina are discontinuous to disrupted, by either displacive growth (disrupted) or by flow (discontinuous). Fine white intraclasts (look fuzzy).
<i>BF-52A-1As-MDC2</i>	856'	shortite	quartz, dolomite, calcite		Mud with displacive growth crystal.
<i>BF-52A-1As-BLM2</i>	856'	shortite	calcite	nahcolite, k-spar	Starved ripple with surrounding mud.

<i>BF-54D-1A-Gym</i>	884'	dolomite		quartz, nahcolite?	Green yellow mud in lean oil shale from perennial lake.
<i>BF08-1396.5-ss*</i>	1396'	shortite	pyrite	sphalerite ?	Laminated mudstone with early fracture fill (interlocking mosaic of dark colored crystals with an outer dogs-tooth-like crystal growth and an interior of randomly orientated interlocking mosaic of randomly orientated euhedral crystals with some opaque sulfide growth in interior.
					
<i>BF08-B28-1a</i>	529'	quartz	albite	pyrite	Sample from lake deposit near a tuff. Dark resistant material imbedded in a white toned tuff layer.
<i>BF08-B15-WN-1A</i>	368'	quartz			White toned nodule in lake muds.
<i>BF08-B84-1a</i>	1278'	trona	nahcolite		Red colored chemical mud lamina that looks similar to a preserved primary saline deposit. Close examination shows fibrous radial clusters, but no clear evidence for mud drapes. Sample does not show evidence for exposure (no desiccation or dissolution) but may have been recrystallized or altered during early diagenesis.
					
<i>BF08-B88-1a</i>	1314'	shortite		nahcolite?	Green-yellow colored late-stage growth fracture fill of euhedral interlocking mosaic of crystals.

<i>BF08-B102-SS*SD</i>	1500'	nahcolite		ankerite, quartz low	Brown randomly orientated crystals in a fracture fill in oil shale
<i>BF08-B98-1a</i>	1440.5'	trona			Fibrous white crystalline intrusion, appears to have been a late stage fracture because of the brittle fracturing features of the surrounding laminated lacustrine sediments.
<i>BF08-B216-1a</i>	883.5'	dolomite, calcite		zeolite (analcime?)	Possible exposed lacustrine sediments and/or evaporites.
<i>BF08-1115-1a</i>	1115'	trona			Recrystallized evaporite unit.
<i>BF-53C-2B-DM</i>	865'	ankerite	quartz	rutile?	
<i>BF-53C-2B-x</i>	865'	shortite			
<i>BF-54A-1a-lgm</i>	871'	nontronite	calcite, dolomite		
<i>BF09-B96B-1a</i>	1440'	trona		opal?	Hydrofracture that is white and brown in color. Has been assigned a trona bed number by Culbertson but is diagenetic and not deposited by the lake.
<i>BF09-B84D-2B</i>	1269'	trona, dolomite		qilianshanite	Mixture of displacive growth materials.